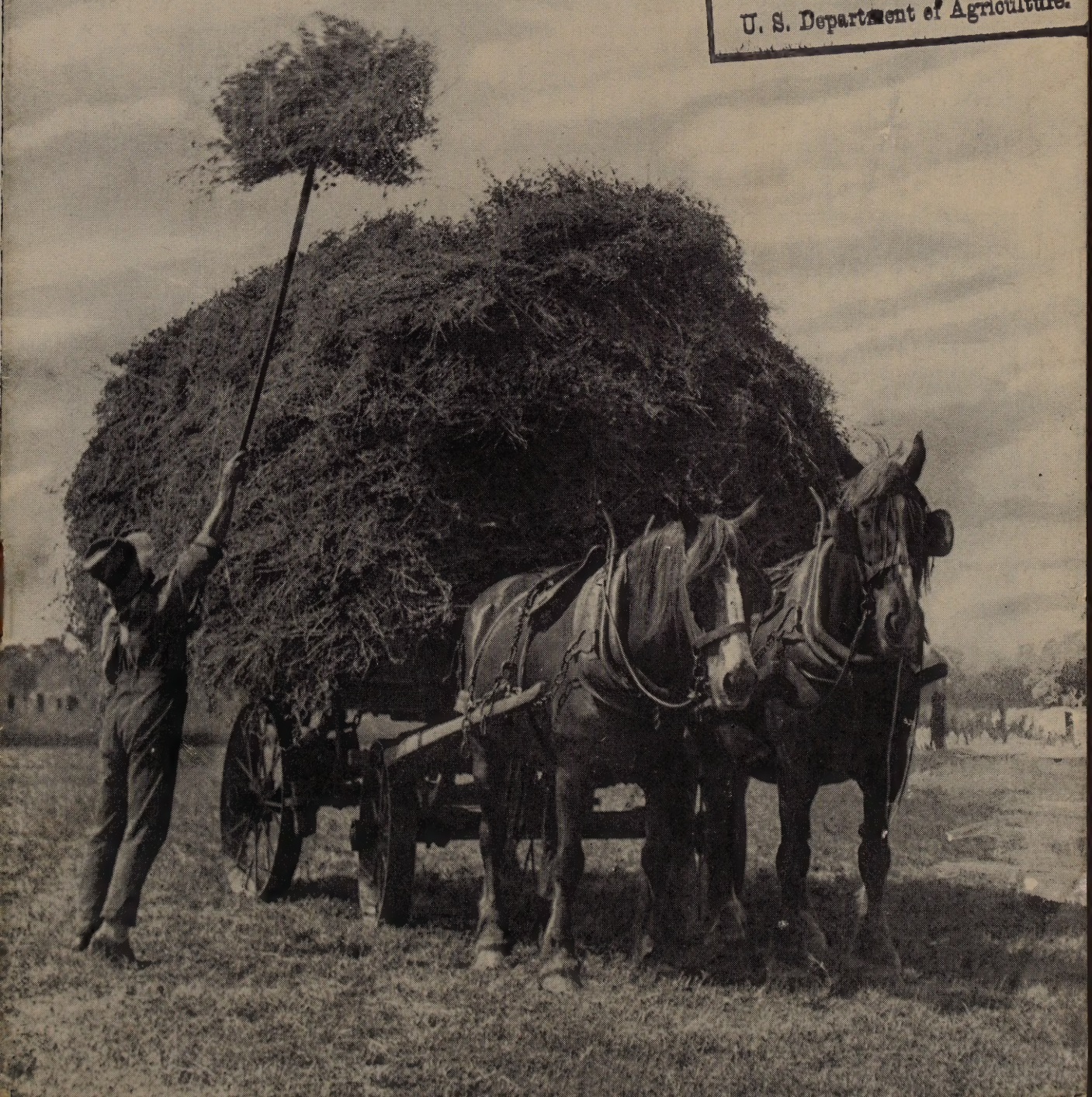


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Mates' 1937 Spring Fodder List

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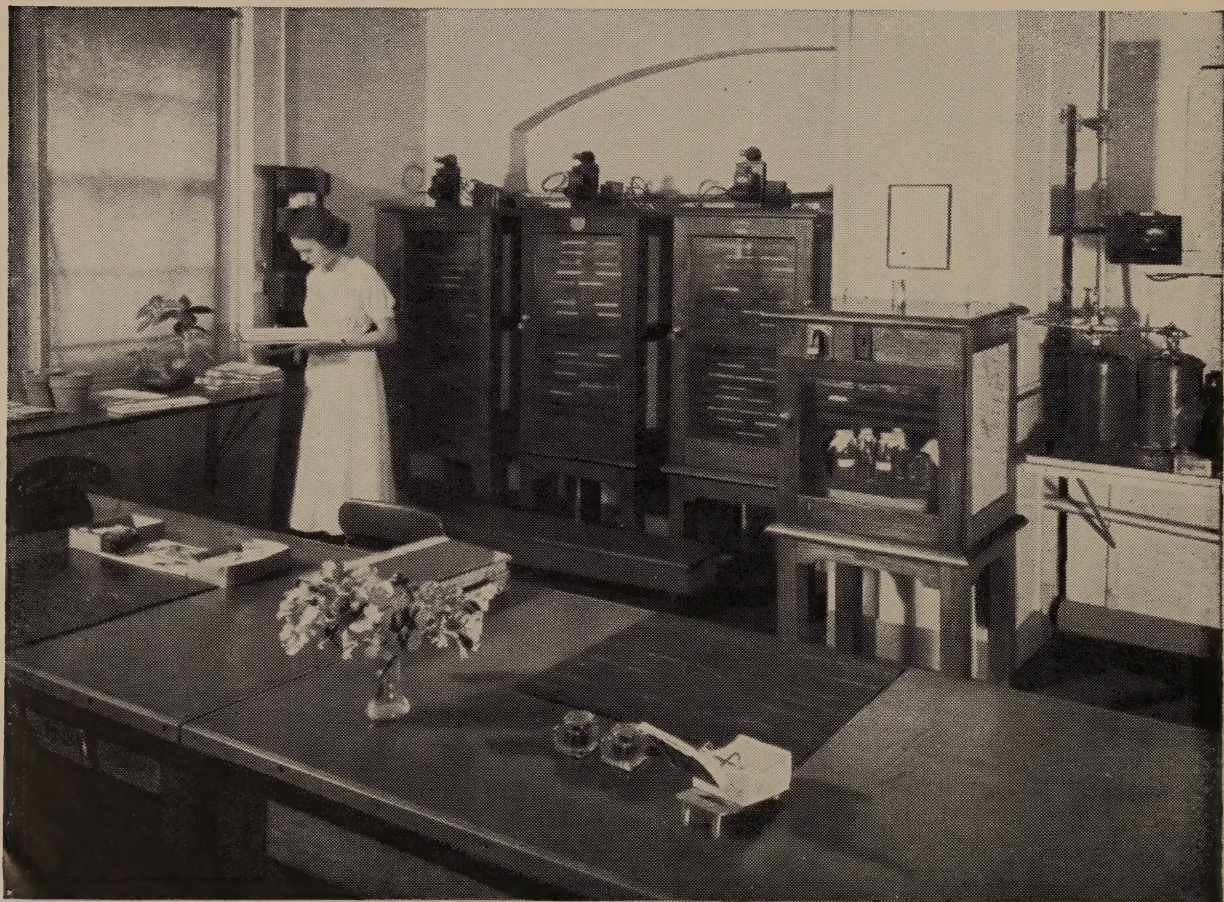
INTRODUCTION

For dairy production, fattening and breeding, it is most important to extend the flush of green feed provided by crops and grass in the spring, as far into the summer as possible, in fact, the aim should be to assure green feed right through into autumn, when winter crops and grass will take up the running. In dry summer climates it is impracticable to depend solely on pasture, no matter how well such is cared for, to assure green feed during summer. Supplementary crops grown on properly cultivated land, where the moisture can be preserved, will provide the green feed desired in all but exceptionally dry climates.

Those who can cut the crops and feed out will find great value in Maizes, Sorghums, and other tall-growing, heavy-yielding crops, which can be grown in drills to allow of inter-row cultivation to preserve moisture and gain maximum yield. Others who desire to graze their supplementary green summer and autumn crops will concentrate on such things as Japanese Millet, Sudan Grass, etc.

It is wise to arrange a succession of sowings at progressive dates to extend the flush of green feed right through and—a most important point—to ensure a good bulk for making silage or other forms of fodder reserves.

This book will, we hope, help you to choose such varieties as should suit your district and requirements. We ask you to bear in mind that Yates' Seeds are very carefully selected for quality of strain and trueness to type, and that they are very thoroughly Dressed and Graded to make them free from weeds and rubbish, and further, they are tested for Germination. In all these requirements, Yates' Quality is exceptionally high. Less need be sown per acre, the risk of introducing weeds is reduced to a minimum, and stout, plump seeds mean a quick get-away and vigorous crops.



This modern Seed Testing Laboratory is situated in our own Warehouse. Every variety of seed is tested periodically throughout the year, and only those showing the requisite standard are released for sale.



TESTING FOR STRAIN AT YATES' TRIAL GROUND.

TERMS OF BUSINESS.

Conditions of Sale and Non-Warranty.

We believe that all Seeds Bulbs and Roots sold by us are of the description and kind specified by us at the time of sale but owing to the practical impossibility in many cases of being certain of this we give no undertaking that such Seeds Bulbs or Roots will correspond with the description under which they are sold and we make all sales subject to this condition. We further give no warranty expressed or implied as to their growth description quality or productiveness and will not be in any way responsible for the crop. If the purchaser does not accept the goods sold to him on these terms they are at once to be returned to us and any money paid to us will be refunded.

PRICES.—We do not print prices in this descriptive list, as values fluctuate, and some of our supplies have not been received into store at time of going to press. Prices and charges applying at time of booking order are clearly set out in Yates' Current Price List, which covers Farm and Market Garden Seeds. It is frequently published, and is always available on request. Current issue is sent you herewith, and later issues will be posted promptly on receipt of your enquiry. All prices, whether printed in the List or otherwise quoted, are strictly subject to prior sale and your prompt reply, otherwise market fluctuations.

DELIVERY CHARGE.—We deliver Seeds on rail or wharf, Sydney, after which Seeds are on customer's account and at his risk. Orders sent by goods train are consigned carriage forward (except to unattended platforms), unless we are otherwise instructed at time of order. Delivery within the Suburban area of Sydney will be made of Farm Seeds, Seed Potatoes, Manures, and Garden Sundries, at the following rates:—Up to 14 lbs., 6d.; up to 28 lbs., 9d.; up to 1 cwt., 1/—; between one and two cwt., 2/—.

FORWARDING INSTRUCTIONS.—Please give full and careful directions with each order and we will do our utmost to comply with them. When no instructions are received we send according to our judgment.

TERMS OF PAYMENT.—Our terms are nett cash with order (including allowance for freight if goods are required by coastal steamer or passenger train, or by goods train to unattended platform).

ARTHUR YATES & CO. PTY. LTD.

LUCERNE.

It has been said that the only places where Lucerne will not grow is where it has not been sown; with very few qualifications this is so. Being a deep-rooting plant it must have a subsoil it can penetrate to a reasonable depth, and it prefers soils which are sweet, and well drained. When established, it is the most drought-resistant and quickest recovering permanent fodder plant known, and is almost a perfect ration for all classes of stock.

Yates' A.Y. Broadleaf Giant Upright Lucerne is specially selected Australian seed of the best deep-rooting, upright Broadleaf strain which has consistently proved much higher yielding and more permanent under Australian conditions than all other types, including Marlborough (N.Z.). Great care is used to make sure the seed is free of all deleterious weeds, and all lines are specially submitted to the Department of Agriculture for examination to make sure the seed is free of Dodder. The seed is very carefully cleaned and graded to eliminate broken seed and trash likely to carry fungus diseases, and to free it of all weeds such as Dock, Fathen, Sorrell, Wild Poppy, etc. Lines with a high percentage of "hard seeds" are specially treated to ensure quick germination so as to beat any weed growth which may be present in the soil. Insist on getting your Lucerne Seed in Yates' standard 50-lb. sealed bags, so as to be sure of planting pure seed of the best type.

The stout, mature, well-filled grains of Yates' A.Y. Giant Upright Broadleaf Lucerne produce strong seedlings which quickly take hold and successfully stand up to hard conditions in the early stages of growth. To establish a really good cutting stand on rich river or creek flats, more seed is sown than would be required for grazing areas or uplands. On the rich flats there is more nourishment and moisture in each square yard, and thus more plants can be properly supported. In the drier areas and in the lighter soils the available moisture and plant food is used to better purpose when the plants are established much more thinly; the extra strength shown by individual plants under such circumstances easily makes up for what might appear to be thinness in the stand.

Carefully sown, 10 lbs. per acre of Yates' A.Y. Giant Upright Broadleaf Lucerne is ample for the richest and most typical Lucerne flats, while 6-8 lbs. per acre will give a good stand on land not so moist or rich. In the drier parts even less need be used. To establish a grazing stand in conjunction with Wheat or Wimmera Ryegrass as little as 2 lbs. of Lucerne Seed per acre will give good results. Lucerne is best sown in the autumn in most warm, dry districts, but in the cooler parts, or where fair summer rains may be expected, successful spring sowings are often carried out.



BOUNTIFUL FODDER RESERVES CAN BE PRODUCED IN SUMMER FOR WINTER USE.

PASTURE GRASSES AND CLOVERS.

While autumn and early winter is usually the best time for sowing the main Pasture Grasses and Clovers, spring often offers opportunities of establishing these plants in our colder Highland parts, particularly on rich, moist lands where spring and summer rains may be expected. To those interested in making spring plantings of these crops, we suggest that they write for Yates' Autumn Farm List, which gives a full description of all varieties.

On the Coastal areas and in those where the main rains come in the summer and autumn, important plantings are made after bush burns and soil preparation from late spring onwards. The best varieties for this purpose are listed below, but where possible, it would greatly improve the pastures if some of the winter-growing Grasses and Clovers, such as White Clover, Perennial Ryegrass, Cocksfoot, etc., could be introduced at the same time. If the burns take place about the end of the year it is often very profitable to include a small proportion of some of these varieties with the main sowing of *Paspalum dil.*, Rhodes Grass, etc. Varieties such as *Paspalum dil.* and Rhodes Grass give heavy feeding through the summer and autumn, but the pastures become very short as the weather gets colder. The introduction of winter-growing varieties, such as White Clover, Perennial Ryegrass, Cocksfoot, *Phalaris*, etc., into the swards of *Paspalum* and Rhodes will increase the annual carrying capacity of the paddock very greatly. For those interested in this matter we would be pleased to consider their problems and help them select the right types for their particular purpose. Our own experience in practical farming and grazing in all its branches, together with a carefully conducted Trial and Testing Ground, our large correspondence, interviews and friendly chats with clients all over the Commonwealth, enables us to keep right up to date on these matters, and is available to anyone who will write us, briefly describing their difficulties and the conditions of soil and climate.

Farm and Pasture Seeds are sometimes mistakenly bought on price only; but far beyond the value, as noted in the price of the seed, is the quality and strain of sample and the ability of the seedsman to understand conditions and requirements. Now that there are so many different strains and varieties that have been developed for special purposes, more and more reliance must be placed on the care and skill of the seed merchant supplying the seed, as great loss of production can occur and valuable land be spoiled if the wrong types are used. With Yates the first consideration is to see that all seeds are clean and free of any deleterious weed and foreign substance, and to have the correct strains likely to give the best return in the soil and situation it is desired to plant.

GRASSES FOR SUMMER PLANTING.

PASPALUM DILATATUM.—One of the most important and valuable pasture grasses for warm climates with a good summer rainfall. It is vigorous and high producing, being very quick growing. In "lush" seasons it quickly makes a great growth of feed, but to get the best out of it, it should be kept as short as possible, as, when old and rank, its feed value goes off rapidly. Hitherto, the sowing of *Paspalum* has been largely confined to warm climates, where it does particularly well; but it is gradually becoming very popular in cooler districts for summer feed when the Ryegrasses and Clovers are dormant. Its use for this purpose is extending rapidly, and is to be recommended. It will grow well in combination with Ryegrass and White Clover, if the pasture sward is properly managed and the rank-growing *Paspalum* kept in reasonable check.

RHODES GRASS.—Particularly valuable for second-class country and hilly land where *Paspalum* does not thrive. Its feed value is not as high as *Paspalum dil.*, but it will grow under harder conditions and with less rainfall. In many districts of Queensland it is proving particularly valuable; when sown in inland districts it is frequently found difficult to get a good "strike," as this plant needs warm, muggy weather to germinate the seed properly.

COUCH GRASS.—This well-known grass occurs naturally in most parts of Australia, and is largely used for lawn grass purposes; while frequently regarded as a pest in cultivation, it has high feed value while growing in the summer, and is occasionally sown on second-class country.

GRASSES FOR SUMMER PLANTING—(continued).

KIKUYU GRASS.—A very vigorous variety, throwing out long, coarse runners, and of very high feed value. Unfortunately, it does not seed (only roots can be planted), which makes it rather expensive to establish, but, being vigorous, if the roots are planted about a yard apart in every third furrow, they will quickly cover the soil. One of its main values is for binding banks, checking erosion, and smothering bracken, etc.

LESPEDeza STRIATA.—Sometimes known as Korean Clover. A summer growing annual legume which throws a heavy crop of seed, which will come up the following season. Not a great deal is known about this yet, as it is still in the experimental stage, but it gives promise of being an important addition to the pasture plants for the northern parts of Australia, where the winter-growing Clovers like White Clover and Subterranean Clover will not thrive. It is most important that pastures contain a fair proportion of leguminous plants to give a proper ration to the stock, and to build up soil fertility. In areas with a reasonably good summer rainfall, where White Clover and Subterranean will not thrive, trial plantings of *Lespedeza striata* are recommended.

LESPEDeza SERICEA.—A perennial form of *Lespedeza* which attracted a good deal of attention in the U.S.A. It makes a very woody growth and does not appear to be of much value except as a green manure crop on second-class country.

TOWNSVILLE WILD LUCERNE (STYLOSANTHES MUCRONATA).—Another summer-growing legume that has attracted some attention in the drier parts of North Queensland. It makes fairly quick growth during the rains, and when it has dried off is relished by stock. It is not recommended except for the Northern parts of Australia, where it is hard to get pastures to grow. It is not a true Lucerne, but belongs to the Legume family.

GIANT OR BLUE PANIC GRASS.—A native perennial from Queensland which is proving of great value under inland conditions; very quick growing, hardy, and appears to stand up to stocking very well. Is recommended for districts too dry for *Paspalum* and *Rhodes Grass*.

MOLASSES GRASS.—A variety which has proved of value in North Queensland, apparently does best in moist tropical situations.

PASPALUM COMPRESSUM (CARPET GRASS).—A vigorous summer growing perennial which does very well on second-class country, too poor for *Paspalum dil.* Its feeding qualities are poor, and it should not be used where better grasses are possible. Being very vigorous it is inclined to crowd out better grasses, so that it should be used with great caution.

POA AQUATICA.—A perennial water grass of high value for low, wet, swampy land, where it will take charge and provide good cattle feed, growing right in the water. Seed is not available, and it can only be introduced by planting roots or sods round the edge of the water, when it will quickly establish and thrive. It does best under fairly cool conditions, and the feeding value is increased by the introduction of *Lotus Major* with it. Roots will be quoted on application.

PASPALUM DISTICHUM (WATER COUCH).—A summer-growing grass which will thrive on low, wet land, but it can be a serious pest in cultivation. Root planting is only recommended when it is reasonably sure the land would otherwise be useless. During the summer it gives much grazing. Roots only available, price on request.



RHODES GRASS.

MAIZES.

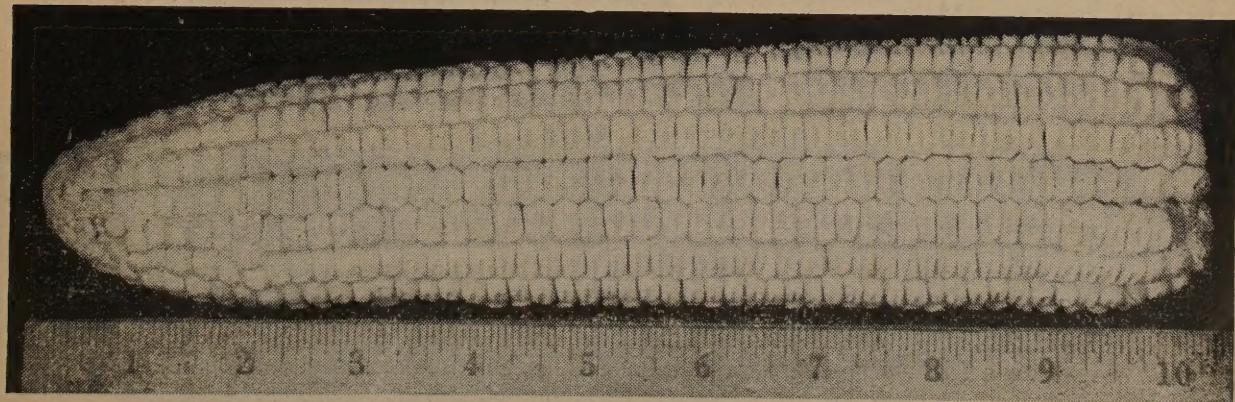
Maize is an essential fodder for the dairyman. It is used mainly in two ways: first, for green feed; secondly, as a grain fodder. In both cases its value has been proved. The variety of maize a farmer would choose when sowing depends entirely on the purpose he has in mind. If required for green feed or ensilage, the types ensuring heavy growth should be chosen. If required for grain, the grower will choose according to conditions of soil and climate—(see detail descriptions, pages 6 and 7).

Maize requires fertile, well-worked soils, and, as with all fodder crops, Maize will respond remarkably well to the application of fertilisers. The rate per acre applied is controlled by the fertility of the soil, but it is usually about 1–2 cwt. per acre. For Grain Production, Maize is usually sown from 8–15 lbs. per acre, according to variety. For Green Fodder, when in drills (which is the best method), use from $\frac{1}{2}$ –1 bus. per acre; broadcasted, $1\frac{1}{2}$ –2 bus. per acre may be used. Fifty-six pounds of Maize equals one bushel.

Without maize the farmer often experiences a great shortage of green feed in the late summer and autumn. He can also prepare for the coming winter, as the grain and green material can be stored and used during those months when the growth of the usual pastures is at its lowest. It is one of the outstanding summer-growing crops, both for grain and green feed, and should form part of the routine of all farms where it can be reasonably well grown; it is one of the highest yielding crops known.

Our Seed Maize is practically all grown specially for us by experts, who use the greatest care in the selection of stock seed, so as to keep the varieties true to type, uniform, and high-yielding. Every year, careful selection of stock seed is made, in many cases with the co-operation of the Department of Agriculture, so that the seed we offer is virtually pedigreed seed of high-yielding strain for the type named. In addition, care is used to eliminate, as far as possible, Maize diseases, but these are so widespread that it is not possible to guarantee seed to be entirely free of all seed-borne diseases, and although every care is being taken in this respect, we do not give any undertaking that the seed is free. Our careful selection for vigour, trueness to type and high-yielding qualities means that farmers will get a much more even stand and larger crops than with ordinary Maize. In addition, all Yates' Seed Maizes are thoroughly cleaned, graded and tested for germination, but they are not "topped and tailed." The thorough grading eliminates all small grains, but the irregular ones from the ends of the cobs are of exactly the same blood as the rest of the cob, and will produce the same true type when grown; experts are all agreed on this, and we therefore consider it unnecessary to add to the expense by "topping and tailing."

Our list of varieties of Seed Maizes covers practically all types and consists of proved sorts for Grain Production, Green Fodder and Silage, being a wide range of early, mid-season and late varieties. Most other varieties of Maize are local selections from these types.



YATES' MAMMOTH WHITE ENSILAGE.

MAIZES—(continued).

Varieties in Order of Importance.

FITZROY (OR IMPROVED YELLOW DENT).—The most important variety we list, a maincrop large yellow dent which, under good conditions, will out-yield any other variety. Being late maturing, it requires a long season, and does best on deep alluvial land, but will grow well on all good-class country. It is one of the best for green feed or ensilage, yielding a very high tonnage per acre. In the coastal Maize districts it is the most popular yellow variety for grain.

HICKORY KING.—A large, round, white Maize, particularly hardy, specially on second-class, light country, where it will out-yield other varieties. While the yield of grain on better-class soils may not be as large as some varieties, this Corn is in particular request on the market, and good samples always fetch a premium. For green feed, it is one of the best, being very leafy and succulent.

YATES' MAMMOTH WHITE ENSILAGE.—A variety recently introduced by us from America. It is extremely tall-growing, thick and succulent in the stem, giving an enormous yield of sappy, green fodder per acre; particularly useful for ensilage. The cobs are very large, with medium-sized, white grain. Specially recommended for good alluvial soils in the warmer Maize districts.

EARLY WHITE DAWN FLINT.—Another recent introduction of ours; under good conditions it will mature ninety days from sowing; particularly recommended for summer feed, as it grows quickly a fine, long, succulent stalk. The cobs are excellent for roasting. The grain is of a pearly white flint character, and yields a heavy crop for such a quick maturer.

SMALL LEAMING.—One of the best general purpose Maizes; gives a heavy yield of rather small yellow grain, and is one of the best varieties under hard conditions, recovering well from a check. It

is particularly recommended for sowing on second-class or rather shallow soils.

EARLY MORN.—One of the most valuable of the quick-maturing dent Maizes; the cobs are of fair size, and it gives a good yield of small, high-class market type grain; particularly recommended for the inland and Tableland districts for grain production.

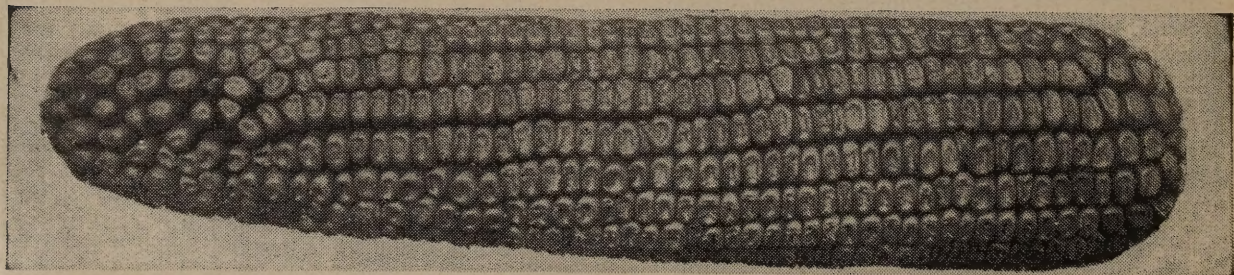
WELLINGROVE (OR EARLY YELLOW DENT).—Recommended as an early grain variety for New South Wales Tablelands and Slopes. On the coast it does not seem to do as well as Funks' Yellow Dent. While chiefly grown for grain, it is sometimes used for green feed in the colder districts.

FUNKS' YELLOW DENT.—A most popular early Maize; a heavy cropper, favoured both inland and on the coast. The grain of this variety is always irregular in shape, consequently the seed frequently looks rather mixed, but this is not the case, it is typical of the variety.

GOLDEN SUPERB.—A variety which is now attracting very much attention. Somewhat similar to Funks' Yellow Dent in habit of growth and season, but some people consider it hardier, and the grain is much more attractive, being of medium size and deep amber colour.

SILVERMINE.—An early white grain variety of exceptional quality; very hardy and outstanding for both green feed and grain. On good soil this variety matures a very heavy crop indeed. The stalks are sappy and succulent, and it is well recommended for green feed or ensilage in all districts; as a grain crop this variety has proved a real bag filler.

60-DAY YELLOW FLINT.—A very small-grained yellow flint Maize, and very dwarf growing. This Maize under test has matured in sixty days from sowing, and should be very suitable for dry climates, or those with a short season; the grain is particularly recommended for pigeon and fowl feed.

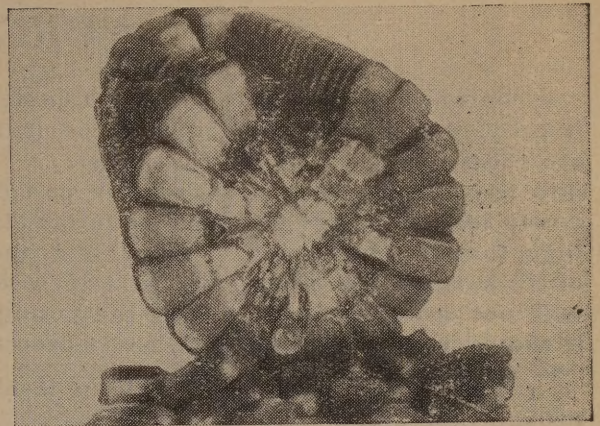


FUNKS' EARLY YELLOW DENT.

MAIZES—(continued).

LARGE RED HOGAN.—A late-maturing sort doing best on rich, deep soil; should be planted early.

90-DAY FLINT.—An old-fashioned flint variety still used in considerable quantities for green feed. It is very hardy, and appears specially suitable for cooler districts, but it is not as early as its name indicates, and should be classed as a mid-season's corn.



FITZROY.

Order of Maturity of Varieties Handled

- VERY EARLY** Early Morn, 60-Day.
EARLY VARIETIES . Wellingrove, Golden Superb, Silvermine, Funks' Yellow Dent.
MID-SEASON Hickory King, Leaming.
LATE VARIETIES . . Fitzroy, Large Red Hogan, Mammoth White Ensilage.
- UPPER NORTH COAST.**—Early Crop: Leaming, Silvermine. Main Crop: Fitzroy, Large Red Hogan.
- NORTH COAST AND TABLELAND.**—Main Crop: Leaming, Golden Superb.
- MIDDLE NORTH COAST.**—Early Crop: Golden Superb, Leaming, Funks' Yellow Dent, Silvermine. Main Crop: Fitzroy, Large Red Hogan, Leaming.
- CENTRAL COAST.**—Early Crop: Funks' Yellow Dent, Golden Superb, Hickory King. Main Crop: Fitzroy, Large Red Hogan, Leaming.
- SOUTH COAST.**—Early Crop: Funks' Yellow Dent, Silvermine. Main Crop: Fitzroy, Large Red Hogan, Funks' Yellow Dent, Leaming.
- NORTH TABLELANDS.**—Main Crop: Wellingrove, Funks' Yellow Dent, Silvermine, Early Morn, Golden Superb.
- CENTRAL AND SOUTHERN TABLELANDS.**—Main Crop: Funks' Yellow Dent, Silvermine, Early Morn, Wellingrove.
- NORTH-WESTERN SLOPES.**—Main Crop: Funks' Yellow Dent, Wellingrove, Silvermine, Early Morn.
- CENTRAL WESTERN SLOPES.**—Main Crop: Funks' Yellow Dent, Silvermine, Early Morn.
- SOUTH-WESTERN SLOPES AND IRRIGATION AREAS.**—Main Crop: Funks' Yellow Dent, Silvermine.

Varieties Recommended for Green Fodder.

COASTAL DISTRICTS.

- EARLY VARIETIES** . Hickory King, Leaming.
LATE VARIETIES . . Fitzroy, Mammoth White Ensilage.

TABLELAND DISTRICTS.

- WARM DISTRICTS** . Fitzroy, Mammoth White Ensilage.
COOLER DISTRICTS Hickory King, Leaming, Mammoth White Ensilage.
COLDEST DISTRICTS. Wellingrove.

WEST SLOPES AND IRRIGATION AREA.

Fitzroy.

SORGHUMS.

Sorghum is one of the most valuable and adaptable crops for the dairyman, as it provides succulent, nutritious feed in the autumn and winter, when the pastures are short and hand-feeding is necessary. As the crop will stand in the paddock right into the winter without spoiling, it can be cut and fed as required, so saving much costly labour, although, if so required, they make excellent silage and give a very high tonnage per acre. While this crop well repays every care and attention, it is much harder than Maize, and will do well under harder conditions and in soils which will not grow Maize well. In the young stage, Sorghum is liable to be poisonous; it should not be used until it has matured to the flowering stage.

Many new varieties have been tested, but the following ones have generally proved best under varying conditions:

SACCALINE.—At present, by far the most popular and most used variety. It is a very hardy, mid-season sort, thriving under most conditions of soil and climate. Being rich in sugar, it has very high feeding value, and stands well into the winter without getting too dry and pithy. It is an excellent variety for ensilage.

EARLY ORANGE.—A sweet, heavy-cropping variety, hardy, slightly earlier than Saccaline, and claimed to be very drought-resistant, of high sugar content, and stands well.

COWPER No. 61.—Very similar to Saccaline, but perhaps earlier, extremely succulent and heavy yielding; stands well into the winter.

WHITE AFRICAN.—Favoured for its heavy cropping habit and its ability to stand right into the winter. It is a very late maturer, and this makes good germinating seed difficult to obtain at times. We give special care in this respect, and do not stock at all, unless we can offer seed of good growth.

EARLY AMBERCANE.—Very quick grower for dry conditions for quick green feed. Not recommended for retaining for winter feeding, as the stalks become dry and pithy, and have very little sugar content. This variety has been largely replaced by Sudan Grass and Japanese Millet.

PLANTER'S FRIEND.—Very hardy, sweet and high yielding, but will not retain its succulence into the winter as long as Saccaline.



SACCALINE SORGHUM.

GRAIN SORGHUM.

Grain Sorghum is very little grown in this country. It is useful as a summer grain crop where the land or climate is not suitable for maize. The seed is unprotected and suffers greatly from the depredation of birds, and there is no market for the grain. It is useful, however, to grow for feeding to stock and fowls on the farm. There are a number of varieties, but we usually stock Feterita or Milo.

SUDAN GRASS.

Sudan Grass is the outstanding main summer fodder crop for tableland and inland conditions where a few useful summer storms may be expected. Sow as early as possible in the spring after danger from frost is over. Well fallowed land, such as wheat land, is ideal for this crop. Once the plants are through the ground and established it will stand a deal of drought without harm, and heat only serves to make it grow the faster, provided a modicum of moisture is present in the soil. To get the best from this crop keep it well fed down. If hand-feeding the crop, cut frequently. Sometimes the early growth appears a little weak and the stools and subsequent crops can be greatly strengthened by feeding off or mowing in the early stages. It is most economical to allow the crop to mature towards the end of the season where hay or pit silage is required; this allows the early growth to be used for the valuable grazing it gives. As Sudan Grass can be stocked very heavily indeed, it is an advantage to roughly harrow from time to time to loosen up the surface and thus let in the air and retain the moisture.

The use of Sudan Grass has been limited, somewhat due to the fear of stock poisoning. In the past there have been stock losses with Sudan Grass, but in comparison with the quantity used we consider it very doubtful if the risk with Sudan Grass is any greater than with many other crops such as Lucerne, etc. One of the troubles in the past has been the mixture of Sorghum and Sorghum-Sudan Hybrid Seed in imported Sudan Grass Seed. We sell only local Sudan Grass Seed which has been carefully examined for freedom from the above mixtures. Although even pure Sudan has been believed to have poisoned stock, we consider the chance too remote to be worth much consideration, except possibly, in the case of particularly valuable Stud Cattle and Horses. Sheep do not appear so susceptible, and we have not heard of any trouble with them.

Our Sudan Grass is Australian grown, carefully selected as regards source of supply, and subjected to expert examination. We have these experts' assurance that they have failed to detect any signs of hybrid seeds in the sample before we offer it. We thoroughly machine-dress and test to a high percentage of strong, even germination. We have built up a name for undoubted reliability with Yates' Sudan Grass, and continue the most careful supervision in our handling of this line, but in the very nature of our business, we cannot enter into any guarantee, and refer purchasers to our terms and conditions of trading as printed on our letterheads, invoices, etc. We have been greatly encouraged in our methods of handling Sudan Grass by the fact that we have never heard of trouble from stock poisoning when Yates' Selected Sudan Grass Seed has been used.

The easiest way to sow Sudan Grass is with a wheat drill, using the seed at about twelve pounds per acre. If it is difficult to set the drill to sow through the grain box, many people mix the seed with the fertiliser and sow through the fertiliser box; depth to sow is about the same as wheat, and the ground should be in much the same condition as required to sow wheat. The only difference is the time of year, because Sudan Grass must definitely not be sown until all danger from frost is over.

Samples are always available for inspection, post free.



SUDAN GRASS.

MILLETS.

As summer fodder crops, the Millets have extreme value because of their quick-growing habit, their hardiness, and the little preparation necessary for sowing. The different varieties vary a good deal, and care should be used in selecting the best variety for the use to which it will be put.

JAPANESE.—This is the variety most largely used and recommended for green feed. It can be sown with a minimum amount of soil preparation, but, of course, will do better with careful preparation; it can be planted any time during the summer as soon as danger from frosts is over, and is invaluable as a quick "catch crop" when a shortage of feed is in sight. It should be eaten off quickly and allowed to recover. If treated properly it can be fed off two or three times.

HUNGARIAN.—Rather finer in the stem than Japanese, and more upright growing; it does not recover well after feeding off, and is grown mostly for making summer hay and for its seed, which is largely used for bird feeding frequently under the name of Panicum.

QUEENSLAND GIANT PANICUM.—A taller, stronger growing form of Hungarian Millet, and for hay purposes to be

preferred; but, like Hungarian, it makes little second growth once it has been cut or fed, so that it is not so good as Japanese for grazing.

PEARL.—A giant-growing form with thick Sorghum-like stems which go rather pithy when matured; does not recover well after feeding off, but is excellent for a quick-growing, heavy green fodder to be cut for cattle.

BROOM.—Only used for grain and for broom making. For the latter purpose it must be grown on deep, rich soil; if interested in the growing of Broom Millet for broom making, write for special leaflet.

OTHER MILLETS are stocked for bird seed purposes, but have little value as fodders, and are not recommended for this purpose.



JAPANESE.

HUNGARIAN.

QLD. GIANT.

MILLETS.

JAPANESE :

For grazing
Green Feed.

HUNGARIAN :

For a quick
Summer Hay
Crop.

QUEENSLAND GIANT :

For cutting
Green Feed and
for Hay.



IMPROVING THE SOIL BY PLOUGHING GREEN CROPS UNDER FOR GREEN MANURE.

SUMMER GROWING LEGUMES.

Leguminous crops are of extreme value in farming operations for enriching the soil. This is particularly the case in the warmer districts where summer crops are largely grown, as practically all these are gross feeders and quickly deplete the fertility of the soil if green manuring crops are not being continually ploughed in. If the best use is made of the following legumes, land growing such crops as Maize, Sorghums, etc., will increase in fertility rather than go back, as is usually the case. By far the most important of the varieties listed is Cow Peas, which will grow over a wide range of districts, act as a good smothering crop for weeds, and add a great deal of nitrogen and humus to the soil. None of the following varieties should be planted until the ground is warm, and in districts where frosts occur they must be sown in time to mature before the frosts. We offer other lines of Legumes for sowing in the Autumn. These are listed in our Current Price List, and will be described in our Autumn Farm Catalogue.

COW PEAS.—If sown alone, broadcast about 1 bushel per acre, or in drills from 10–15 lbs. per acre. When broadcasting with Millets, or sown between rows of Maize, 8–10 lbs. per acre should suffice.

Black Seeded.—The most largely used variety, of trailing habit, and very vigorous, producing a heavy bulk of green material.

Clay Coloured.—Bushy in habit and not so vigorous as the Black Seeded, and maturing rather earlier.

POONA, SMALL SEEDED.—Vigorous, trailing variety, rapidly becoming very popular, but it does not appear to do so well on the sugar plantations of Northern New South Wales as the Black Seeded. Being small seeded, the rate of sowing should be about half that of other varieties.

SOY BEANS.—These are not much grown in this country. Trials are continually being made, but few of them are

turning out successfully. In other countries they are proving of great value, and we stock a selection of varieties for those interested. (See Yates' Current Price List for varieties.)

MAURITIUS BEANS.—Of more vigorous habit than Cow Peas, and have a longer season; they are most suitable to the moist tropical areas, and are not recommended elsewhere. In the sugar cane areas they are found very useful for green manuring crops, giving a heavier bulk of feed than Cow Peas, and maturing later.

VELVET BEANS.—Very similar to Mauritius Beans, and used for the same purpose.

PEANUTS.—Sometimes used for Green Manure, but more often for the root nuts. For this latter purpose only grow in semi-tropical climates such as far North Coast, New South Wales. We stock three or four varieties (see Yates' Current Price List).

SUNDRY FODDER PLANTS for Spring and Summer Planting.

JERUSALEM ARTICHOKEs.—Tubers of this root crop are of special value as a fodder for pigs. Farmers requiring something to build up weight in young growing pigs, and sows reduced in condition after suckling big litters, find few crops more fattening and payable than Jerusalem artichokes. The plant is hardy and will adapt itself to poorer soils, also doing exceptionally well on good potato land. Sow the same time and similarly to potatoes, using about 4 cwt. per acre. This crop can be fed when the tops have died down, and the pigs may be turned into the crop and allowed to forage for the tubers. If sufficient tubers are allowed to remain in the soil the crop will re-establish itself next season.

MANGOLDS.—Mangolds are not grown to any great extent owing to the large amount of labour required for cultivating, etc., but they yield a larger tonnage of high quality fodder than almost anything else. It has been calculated that 1 acre yielding a 30-ton crop (which can easily be expected in reasonably good ground), will be equal in fodder to 2 acres of Maize yielding 90 bushels per acre. Usually Mangolds are grown through the summer for winter feed, but in the milder parts of Queensland they are planted in the late summer and autumn for feeding in the late spring, when feed is often scarce. Mangolds require rich, rather heavy soil, and they must be well cultivated and grown on without check. Sow in rows about 5 lbs. per acre, and thin out the young plants to about 6 or 8 inches apart in the rows. The rows should be about 2ft. 6in. apart. We stock four varieties:

LONG RED.—The most popular sort, giving large tankard-shaped roots. Needs deep soil.

YELLOW GLOBE.—Claimed to be an improved variety with a very high, dry matter content.

HALF-SUGAR ROSE, and HALF-SUGAR WHITE.—Very popular in Queensland for autumn planting.

SUGAR BEET.—A variety of Mangold developed for Beet Sugar production, but sometimes used for stock feed.

ELEPHANT GRASS.—Not a pasture grass, but a tall-growing bamboo-like plant, useful for growing in odd corners to produce a cutting crop. It grows

very quickly, and if cut when the shoots are young, makes quite good fodder. Does not seed, but we always have roots available.

BUCKWHEAT.—Not a cereal, but a quick-growing plant, producing large quantities of seed useful for poultry feeding, etc.; also for home use as Buckwheat Cakes. It will not set seed well if subjected to hot winds. The flowers provide a good honey yield for bees.

MELONS, MIXED CATTLE.—Produce a quick, heavy crop of palatable cattle fodder in warm, moist, coastal districts. They make a good stand-by for pigs.

FIELD PUMPKINS.—Heavy yielders, and can be stored for winter feeding. Make excellent winter feed for pigs.

GRAMMA OR TROMBONE PUMPKINS.—As well as being a splendid vegetable sort, this variety has special feeding value for stock. They are softer than ordinary pumpkins, and can be fed to stock whole.

SUNFLOWERS.—The giant variety is grown in drills like maize on rich land. The heavy crop of seeds make rich fodder, and always find a market.

COW CANE.—A variety of sugar-cane which is only suitable for tropical coastal areas, and is grown for cutting for cow and pig feed. It gives a large volume per acre of succulent feed, but to give a proper ration should only be used with some concentrate, such as Bran or Lucerne Hay. There are many varieties, the one we find best being Queensland P.H. Rooted cuttings only available in season.



JERUSALEM ARTICHOKEs FOR PIG FEED.

PEAS AND BEANS AS MARKET CROPS.

Peas for the Green Pea Market.

Where the summer season is hot and dry, the best time to sow Peas is in the early spring and again in the autumn. Peas will grow during cold winter weather, but flowers will not set and the pods form when frosts are present. But Peas do not grow and produce a worth-while crop in the hot summer time. Although in the general run of districts it may be courting failure to sow Peas, say after early October, there are cool districts of high altitude and good rainfall where crops can be sown later to yield right through the summer.

By choosing varieties to suit a particular district and time of sowing, it is wise to consider whether the sort chosen is a very quick maturer (extra early); a medium quick maturer (early), or a main crop variety (main season). In the following list we describe these varying types.

The moisture requirement of a Pea crop is considerable, and very thorough preparation of the soil before sowing and thorough inter-row cultivation while the crop is growing, are very essential. It is also most necessary to bear in mind the plant food requirements, and supply such ample superphosphate or mixed Pea fertilizer as the soil may require.

Seed is usually sown in furrow drills at round about 2 bushels per acre, and the depth covered by harrowing the same way as the drills are opened. Depth of sowing will vary somewhat according to the class of soil and time of year. In warm weather and in open soils, Pea seed may be sown three inches deep to get same into the moisture and protect from excessive heat. But in clayey soils, especially when conditions are cold and wet, a much shallower sowing is desirable. The seed will not stand water-logging, and in cold, wet, clayey soils, almost a complete sowing may rot before sprouting, if the soil is not in very open, well-cultivated condition, and any water-logging in the drills takes place. When once through the ground, cultivate between the rows with a harrow-tooth cultivator, and as the crop advances, use wider and deeper tines, and when tall enough, "hillers" should be attached to the cultivator. Do not sow Peas too thinly in the rows; the plants like to grow in close association with each other, and they do not like weeds, which may be difficult to eradicate or smother out in the row if too thin a sowing is made.

In coastal districts in frost-free situations planting may be made from March to October. The Christmas market may be catered for by planting round about the first week of October. On the Tablelands plantings are made from September to December or early January, so as to catch the Easter market.



GREENFEAST PEA.

Growing Market Peas on Stakes.

In very high quality soils where intensive production is practised, there has been some successful development of the growing of green Peas for market by supporting the vines on low brushwood or wire netting. An amazing increase of crop can be gained in this way, but the arrangement must not interfere with the necessary thorough cultivation. To properly grow tall varieties, such as Telephone, some support is necessary; but even the main-crop sort, Greenfeast, and the extra early sort, Earlicrop, do respond remarkably to the treatment.

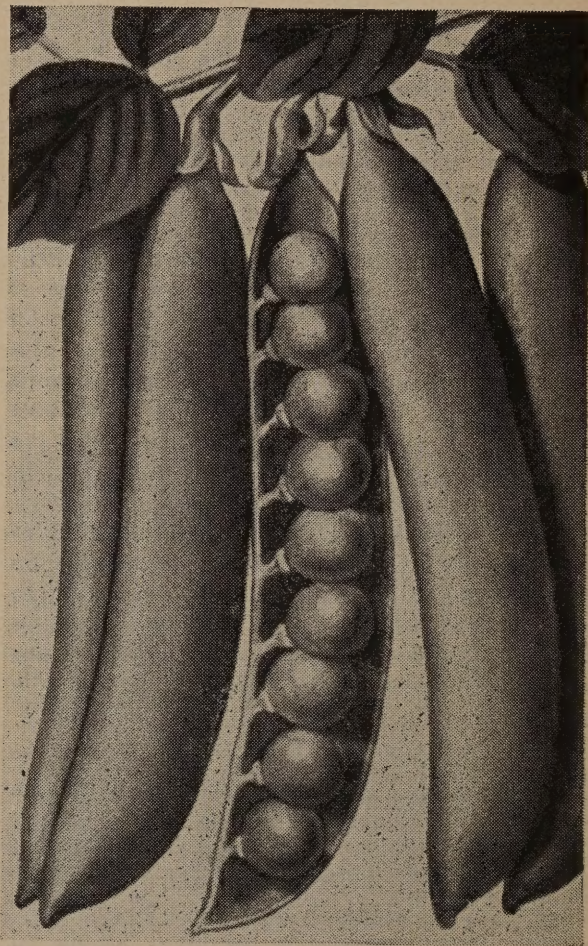
GREENFEAST.—For field culture this is the favoured main-crop variety. It is considered the main-crop type not only because of its season, but also owing to the fact that pods are of outstanding marketable quality, being long, curved, well filled, and somewhat round. One of its greatest attributes is that it provides picking over an extended period. It is extremely hardy, and the most popular among market growers. Our experience with this variety has proved it to be one of the best for withstanding hot weather and dry spells. Seed we offer is specially contract grown in New Zealand under our own supervision from re-selected stock seed.

EARLICROP.—This variety has rapidly come into prominence owing to its early maturing habit. We introduced it a few years ago, and it has consistently grown in reputation, until to-day it bids fair to become second only to Greenfeast in popularity. It is bred from the same blood as Greenfeast, and has the same very attractive qualities. Being a very early maturer—in fact, according to our trials, the earliest pea we have—it has a very distinct and definite value for a very quick-maturing crop when planted early, as well as when sown late; this applies especially to late spring and also to autumn sowings, when it can be sown to mature before the season is too late. The pods are of excellent marketable type, somewhat similar to Greenfeast, and are of excellent quality. It is a very heavy cropper for such a quick yielder, but, of course, not as heavy as the main-crop sort, Greenfeast.

YORKSHIRE HERO.—This is a variety becoming less popular as a main-crop market sort, having been superseded by Greenfeast, but nevertheless, it is a type well known on the market. Apart from Greenfeast and Earlicrop, it is probably the hardiest variety. Unless, through some local conditions, it proves more valuable than Greenfeast, we would prefer Greenfeast as a main-crop, and Earlicrop as an early Pea.

ENGLISH WONDER.—This variety is a dwarf-growing early Pea being very prolific. Pods are long and straight, containing a good number of peas, but they are not so favoured in the main markets as Greenfeast and Earlicrop. It is a strong, sturdy grower. Generally speaking, the growing of this Pea seems to be confined to places where there is a local demand.

RICHARD SEDDON.—Richard Seddon and English Wonder are, in characteristic and description, very similar. It is a good all-round variety. For other Peas less known on the commercial market we refer you to the descriptions in Yates' Annual.



EARLICROP PEA.

Beans for the Market.

Beans are one of the most important commercial crops for spring and summer planting. Where no frost is experienced they are also a very valuable autumn and winter crop, coming in when supplies are scarce and prices good.

Unfortunately, Bacterial Blight (Halo Blight) is very general with this crop, and under certain conditions has made the successful growing of Beans rather hazardous. Every effort has been made to control this trouble, but so far without any great success. The production of resistant types is being attempted and gives good promise for the future, but at present, no sorts possessing the characteristics of a good commercial variety are available showing high resistance, except New Discovery and Feltham Prolific, the former of which we strongly recommend. We exercise as much care as possible in the selection of our seed and crops to keep infection to a minimum, but we regret to say that, so far, it is impossible to offer seed which can be claimed as absolutely free of Bacterial Blight disease.

Beans do best on good, light, friable soil, but will do well on any good-class soil provided there has been deep, thorough preparation and good tilth is maintained with proper cultivation during the growing period. They respond well to heavy dressings of Phosphatic and Potassic manures.

In mild districts, particularly near the coast, continuous sowings can be made as soon as the danger of frost is over right up to mid-summer, but in the hotter districts where winter crops are grown, some difficulty will be found in growing beans in the summer as they do not thrive under very hot, humid conditions. Throughout the year the green market fluctuates a lot, and it will be found that in most districts crops are grown for a particular period and market.

Although we list a wide range of varieties, commercial growers generally keep to a comparatively few sorts, such as Canadian Wonder, Brown Beauty, New Discovery, Feltham Prolific, Staley's Surprise, etc., which we describe more fully below, and we recommend growers of commercial areas to confine their attention to them. However, we feel we should briefly mention here another variety which is really a strain of Canadian Wonder. Burnley Wonder is a selection from Canadian Wonder originally selected by the Victorian Department of Agriculture from a field of Canadian Wonder Beans in which certain plants showed considerable resistance to Bacterial Blight. The result of this selection has produced a strain with some of the merits of Canadian Wonder and with a marked freedom from Bacterial Blight. It loses something in colour and length of pod compared to the parent strain, but we think small trials, especially in districts where Bacterial Blight is serious, are worth while. We offer small quantities of this sort in our Current Price List. We have not yet thoroughly tried out this variety, and would welcome reports from those who care to try a little. Where the area available is very small, and the maximum of yield is required, a good climbing variety, such as Yates' Epicure, can be used, but in this case, the expense of providing proper support must be taken into account. Under intense culture on small areas, this extra expense can be well repaid by the higher yields of this excellent climbing bean.

CANADIAN WONDER.—The most popular commercial variety, and one of the best general purpose sorts. It bears long, slightly-curved pods of good colour and size, is very prolific, and under good conditions will give continuous picking over an extended period. Unfortunately, it is extremely susceptible to Bacterial Blight, and, although our seed is picked from the cleanest crops available, it may cause serious trouble under adverse weather conditions, such as continuous cool, rainy conditions with winds. Wind-driven rain seems to seriously spread the infection.

STALEY'S SURPRISE.—A new variety which is not yet very widely known, but is already popular in one or two districts, particularly in Southern Queensland. A medium early sort which is particularly noted for the great length of pod, often eleven inches and more when well grown; these pods are very attractive, but with any sort of a check they tend to curl badly and become very misshapen. Nevertheless, it is a good sort, and well worth trying under varying conditions.

BEANS—(continued).

BROWN BEAUTY.—This variety is coming into great prominence, and is now largely used by commercial growers. It matures a little earlier than Canadian Wonder, and the pods are rather straighter and thicker than that variety. It will not stand so much continuous picking as Canadian Wonder. When the pods are picked at the right time, they are very attractive, and in the Sydney Vegetable Markets buyers will often pay a premium for attractive consignments of this variety. While Brown Beauty has not seemed to have suffered from Bacterial Blight to the same extent as Canadian Wonder, however, it is really very susceptible to this disease and cannot be relied on to stand up under adverse conditions in this respect. The seed of Brown Beauty will be cheaper than Canadian Wonder this season, and, as the seed is smaller, it takes less to plant an acre.

NEW DISCOVERY (or IMPROVED FELTHAM PROLIFIC) and FELTHAM PROLIFIC.—These two varieties are very early dwarf growers, having a nice bushy plant which is highly resistant to practically all diseases. They are very prolific, giving a good yield of rather small, straight pods. They must be picked young as the pods are very stringy when old. New Discovery is larger podded than Feltham Prolific, and, although still rather small compared with the long-podded sorts, such as Canadian Wonder, Brown Beauty, etc., they are reasonably

sized for the markets, and where an extra hardy early bean is required, we have no hesitation in recommending it.

BURNLEY WONDER.—A selection from Canadian Wonder which shows marked resistance to Bacterial Blight. This variety was selected by the Victorian Department of Agriculture from badly infected crops. While it is a pure Canadian Wonder in blood, the plants are rather more bushy and the pods are shorter, straighter, and a little lighter in colour. It has not yet been thoroughly tested under varying conditions of soil and climate, but its freedom from Bacterial Blight makes it worthy of trial, particularly in districts where this trouble is very serious.

There are several other varieties of Dwarf French Beans described in Yates' Annual, which are grown for use in the home garden or commercially, where local demands exist, but apart from the varieties as described, we would not recommend them to market growers.

In this publication, prices of Peas and Beans are not included, and we would appreciate it very much if those interested would refer to the ruling issue of Yates' Current Price List, published on the first of each month, where, in Section 10, seed is priced from $\frac{1}{4}$ -bus. upwards, and under $\frac{1}{4}$ -bus. in Section 14. For greater quantities than those catered for in the Price List we would welcome enquiries.



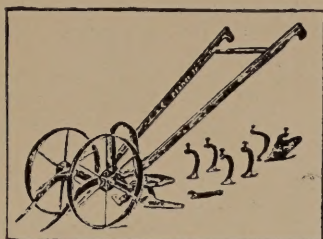
BROWN BEAUTY.

Spray Pumps & Farm Implements

MINTERN HILL and DRILL SEEDERS DOUBLE WHEEL HOES SINGLE WHEEL HOES

HAND PLOWS and HORSE HOES

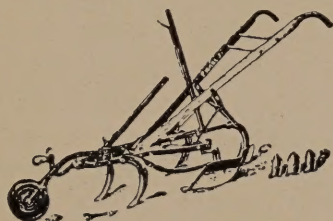
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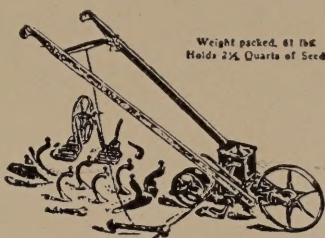
No. 12 Double and Single Wheel Hoes Combined.

Price £3/7/6

No. 11. The same as No. 12, with the addition of two three-tooth Rakes and two five-tooth Rakes to the equipment. Price £3/12/6

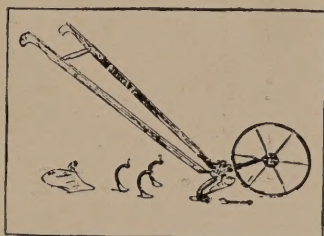


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Weight packed, 81 lbs.
Holds 2 1/2 Quarts of Seed

The No. 25 Combined Hill and Drill Seeder and Double Wheel Hoe. Price - £5/17/6



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Brass Alloy, 94/6

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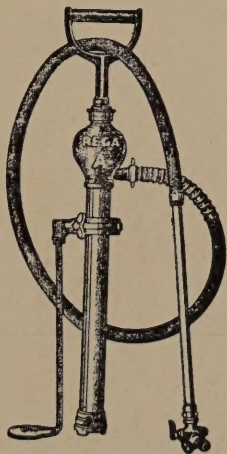
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W.A. and S.A. . . 5/-

Model "B" is a little smaller than Model "A."

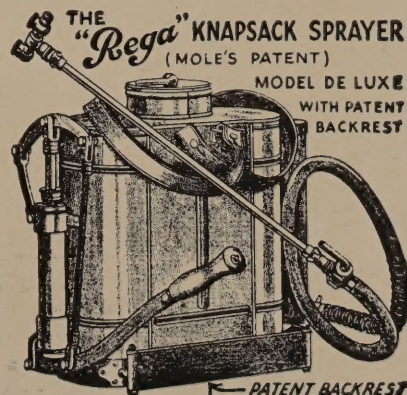
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